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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/535,407

05/18/2005

Takamasa Kato

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EXAMINER

SMITH, CAROLYN L

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1631

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/535,407	Applicant(s) KATO ET AL.	
	Examiner Carolyn L. Smith	Art Unit 1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 1, 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7222005.11062006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amended claims 1, 3, and 4, filed 1/31/07, are acknowledged.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The present title is directed to a data processing system using base sequence-relating data, whereas in contrast the elected claims are specifically directed to a method for processing information on a nucleotide sequence.

Drawings, filed 5/18/05, are accepted by the Examiner.

Claims herein under examination are 1-6.

Specification

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

In the instant case, the abstract is directed to a system, whereas the instant claims are directed to a method.

Claim Objections

Claims 1 and 6 are objected to because of the following informalities:

Claims 1 and 6 recite “processing information on nucleotide sequence” which is syntactically awkward. Amending in the word “a” before the word nucleotide would nullify this objection.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Under the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility (published in the O.G. notice (1300 OG 142) on 11/22/2005) a method that does not result in a physical transformation of matter MAY be statutory where it recites a concrete, tangible and useful result; i.e. a practical application.

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Claims 1-6 are drawn to a method for processing information on a nucleotide sequence. A statutory process must include a step of a physical transformation, or produce a useful, concrete, and tangible result (State Street Bank & Trust Co. v. Signature Financial Group Inc. CAFC 47 USPQ2d 1596 (1998), AT&T Corp. v. Excel Communications Inc. (CAFC 50 USPQ2d 1447 (1999))). In the instant claims, there is no step of physical transformation, thus the Examiner must determine if the instant claims include a useful, concrete, and tangible result.

In determining if the claimed subject matter produces a useful, concrete, and tangible result, the Examiner must determine each standard individually. For a claim to be “useful,” the claim must produce a result that is specific and substantial. For a claim to be “concrete,” the process must have a result that is reproducible. For a claim to be “tangible,” the process must produce a real world result. Furthermore, the claim must be limited only to statutory embodiments.

In the instant case, claims 1-6 do not produce a tangible result. A tangible result requires that the claim must set forth a practical application to produce a real-world result. The method as claimed may take place entirely within the confines of a computer or human mind without any communication to the outside world. Because no practical result is recited in the claims, these instant claims do not include any tangible result. This rejection could be overcome by amendment of the claims to recite that a result of the method is outputted to a display or a memory, or by including a physical transformation (provided there is adequate written support in the originally filed application).

Claims Rejected Under 35 U.S.C. § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

Claim 1 (line 6) recites “a plurality of sets” which lacks clarity. It is unclear to what the sets are referring. Are they referring to sets of individuals, sets of nucleotide sequences, sets of data, or some other scenario? Clarification of this issue via clearer claim wording is requested. Claims 1-5 are also rejected due to their dependency from claim 1.

Claim 1 (line 9) recites “recorded thereon by each individual” which lacks clarity. Due to the awkward sentence construction, it is unclear if the "recorded" limitation is referring to the identifying or to the information of the memory. Clarification of this issue via clearer claim wording is requested. Claims 1-5 are also rejected due to their dependency from claim 1.

Claim 1 (line 10) recites “including nucleotide sequence-related information that has consistency of the received nucleotide sequence-related information” which lacks clarity. Due to the awkward sentence construction, it is unclear if this "including" limitation is intended to be identified or recorded, or some other scenario. Clarification of this issue via clearer claim wording is requested. Claims 1-5 are also rejected due to their dependency from claim 1.

Claim 2 (last line) recites "the predetermined positional information" which lacks clear antecedent basis. While there is mention of "a predetermined individual", there is no previous

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mention of "predetermined positional information". Clarification of this issue via clearer claim wording is requested.

Claim 3 recites "wherein in step (b), receiving nucleotide sequence-related information concerning the predetermined individual" which lacks clarity. The receiving limitation was recited in step (a), not step (b) of instant claim 1. Clarification of this issue via clearer claim wording is requested.

Claim 4 recites "are independently carried out" and "is constructed" which lack clarity. Since the verbs are recited in a passive tense, it is unclear whether these are intended to be actual method steps, are intended results, or are merely some limitation of data (i.e. that which is found in a database, for example). Clarification of this issue via clearer claim wording is requested. Applicant is reminded that any method steps must be clearly recited in active, positive language.

Claims 5 and 6 recite "a plurality of individual-related information" (a) AND "a plurality of nucleotide sequence-related information groups" (b) OR "the results of statistical processing" (c) which lack clarity. It is unclear what Applicant intends these limitations to mean. Is it either (a) and (b) together or "c" individually? Is it (a) along with one or either (b) or (c)? If it is (c) individually, which are the results of statistical processing, is it intended to be statistically processed again? Clarification of this issue via clearer claim wording is requested.

Claim 5 recites "are statistically processed" which lacks clarity. Since the verb is recited in a passive tense, it is unclear whether this is intended to be an actual method step, is an intended result, or some other scenario. Clarification of this issue via clearer claim wording is requested. Applicant is reminded that any method steps must be clearly recited in active, positive language.

Claims 5 (penultimate line) and 6 (lines 4, 14, 15, 16) recite the limitation “and/or” which lacks clarity. It is unclear if Applicant intends to use the limitation “and” or the limitation “or”. Clarification of this issue via clearer claim wording is requested.

Claim 6 recites the limitation “the contents” in line 13. There is insufficient antecedent basis for this limitation in the claim, as there is no previous mention of “contents.” Clarification of this issue via clearer claim wording is requested.

Claim 6 (line 15) recites the limitation “the use of” which is vague and indefinite. It is unclear what step or steps are encompassed by this limitation. Clarification of this issue via clearer claim wording is requested.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Applicant cannot rely upon the foreign priority papers to overcome any prior art rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15. Therefore, the earliest filing data for the priority date of the instant application is 11/19/03.

Claim Rejections – 35 USC §102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6 are rejected under 35 U.S.C. 102(a) and (e) as being anticipated by Holden (US 6,640,211 B1).

Holden discloses a method for processing information on nucleotide sequence (Figures 1, 4, col. 1, fifth paragraph) comprising steps of:

(a) receiving nucleotide sequence-related information concerning a predetermined individual (col. 1, first and fifth paragraphs); and

(b) identifying, from a memory comprising a nucleotide sequence-related information group for each individual (i.e. disease phenotype) including a plurality of sets to which positional information representing a position in a nucleotide sequence (i.e. genetic markers) and nucleotide sequence-related information corresponding to the positional information are mutually related, recorded thereon by each individual, a nucleotide sequence-related information group as a group concerning the individual of step (a), including nucleotide sequence-related information that has consistency of the received nucleotide sequence-related information (claims 2, 7, 8, 12; col. 1, fifth paragraph; col. 3, fifth paragraph), as stated in instant claim 1.

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Holden discloses a method comprising receiving nucleotide sequence-related information corresponding to the predetermined positional information (col. 1, first and fifth paragraphs; claim 12), as stated in instant claim 2.

Holden discloses receiving nucleotide sequence-related information concerning the predetermined individual (col. 1, first and fifth paragraphs) and identifying a nucleotide sequence-related information group including nucleotide sequence-related information having consistency of the received nucleotide sequence-related information are repeated until a single nucleotide sequence-related information group is identified (Figure 1 arrows show repetitive process; claims 2, 7, 8, 12; col. 1, fifth paragraph; col. 3, fifth paragraph), as stated in instant claim 3.

Holden discloses a method of receiving individual-related information concerning the predetermined individual, wherein steps are independently carried out for each of a plurality of individuals and a database comprising a plurality of nucleotide sequence-related information groups concerning the plurality of individuals in association with a plurality of individual-related information concerning the plurality of individuals is constructed (claims 14 and 15; col. 1, first and fifth paragraphs; col. 3, fifth paragraph), as stated in instant claim 4.

Holden disclose a method wherein a plurality of individual-related information concerning a plurality of individuals contained in the database and a plurality of nucleotide sequence-related information groups concerning a plurality of individuals that are or are not contained in the database or the results of statistical processing of the plurality of nucleotide sequence-related information groups are statistically processed (i.e. tests in col. 4, first

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paragraph) to create semantic information implied by nucleotide sequence-related information and/or information associated with the semantic information (claims 14 and 15; col. 1, first and fifth paragraphs; col. 3, fifth paragraph; col. 4, last paragraph to col. 5, last paragraph), as stated in instant claim 5.

Holden discloses a method for processing information on nucleotide sequence (Figures 1, 4, col. 1, fifth paragraph) comprising steps of:

obtaining semantic information implied by nucleotide sequence-related information and/or information associated with the semantic information, wherein said semantic information is created by statistically processing: a plurality of individual-related information concerning a plurality of individuals contained in a database comprising a plurality of nucleotide sequence-related information groups concerning a plurality of individuals in association with a plurality of individual-related information concerning the plurality of individuals; and a plurality of nucleotide sequence-related information groups concerning a plurality of individuals that are or are not contained in the database or the results of statistical processing of the plurality of nucleotide sequence-related information groups (claims 14 and 15; col. 1, first and fifth paragraphs; col. 3, fifth paragraph; col. 4, last paragraph to col. 5, last paragraph); and

constituting the contents of a memory for providing semantic information and/or information associated with the semantic information in accordance with request information for an object and/or service with the use of the obtained semantic information and/or information associated with the semantic information (claims 14 and 15; col.

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1, first and fifth paragraphs; col. 3, fifth paragraph; col. 4, last paragraph to col. 5, last paragraph), as stated in instant claim 6.

Thus, Holden anticipates the instant invention.

Conclusion

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR §1.6(d)). The Central Fax Center number for official correspondence is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn Smith, whose telephone number is (571) 272-0721. The examiner can normally be reached Monday through Thursday from 8 A.M. to 6:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marjorie Moran, can be reached on (571) 272-0720.

February 23, 2008

/Carolyn Smith/
Primary Examiner
AU 1631

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